

Effects of Irrigation Intervals and Amounts of Superabsorbent on Remobilization in Sesame under Hamidieh Weather Conditions

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Abstract

To evaluate the effect of irrigation intervals and different amounts of superabsorbent on the remobilization in sesame under Hamidieh region weather conditions, a field experiment was conducted a split plot in a randomized complete block design with four replications, in 2015. Treatments included irrigation intervals at 3 levels (60, 100 and 140 mm evaporation from class A pan) in the main plots and superabsorbent at three levels (0, 75 and 150 kg per hectare) in sub-plots. The results showed that the effect of irrigation intervals and superabsorbent could significantly increase the yield, the remobilization, current photosynthesis, and the contribution of remobilization to crop performance. The highest grain yield, remobilization, and current photosynthesis as well as the maximum contribution of remobilization and current photosynthesis was obtained in the treatment consisting of 100 mm pan evaporation treatment and 150 kg per hectare superabsorbent. In examining the interaction between water and superabsorbent, highest grain yield (average 1216.46 kg per hectare) was in the treatment of 100 mm evaporation from pan and 150 kg per hectare superabsorbent. Considering the water shortage in the country, it seems that the treatment including 100 mm pan evaporation and 150 kg per hectare superabsorbent not only can save water but can also make good economic performance.

Keywords: Current photosynthesis contribution, Sesame grain yield, Water saving grain yield .

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* - Received: April 2016, and Accepted: December 2016